MS APPEAL BRIEF - PATENTS
Docket No.: 3891-0103P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Moshe CZEIGER et al.

Application No.: 10/040,643 | Confirmation No.: 3010

Filed: January 9, 2002 | Art Unit: 2144

For: MAPPING BETWEEN VIRTUAL LOCAL AREA NETWORKS AND FIBRE CHANNEL ZONES | Examiner: T. T. Nguyen

APPEAL BRIEF TRANSMITTAL FORM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Appeal Brief on behalf of the Appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on February 16, 2006.

☒ Applicant claims small entity status in accordance with 37 C.F.R. § 1.27.

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Dated: May 16, 2006

Respectfully submitted,

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Attachment(s)

MS APPEAL BRIEF
PATENT
3891-0103P

IN THE U.S. PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF		BEFORE THE BOARD OF APPEALS	
Moshe CZEIGER et al.		APPEAL NO.:	
APPL. NO.:	10/040,643	GROUP:	2179
FILED:	January 9, 2002	EXAMINER:	T. T. Nguyen
FOR:	MAPPING BETWEEN VIRTUAL LOCAL AREA NETWORKS AND FIBRE CHANNEL ZONES		

APPEAL BRIEF

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APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As required under § 41.37(a), this brief is filed more than two months after the Notice of Appeal filed in this case on February 16, 2006, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Sancastle Technologies Ltd., having a place of business at 5 Carmel Street, P.O.Box 340 Yokne'am, Israel. The assignments were recorded in the U.S.P.T.O. on January 9, 2002, under Reel 012462, Frame 0171.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

This application as filed included claims 1-20. All the claims were finally rejected in an Official Action dated August 22, 2005.

On February 16, 2006, Appellant appealed from the rejection of claims 1-20 (all the claims currently pending in this application).

IV. STATUS OF AMENDMENTS

Claims 1 and 11 were amended subsequent to the final rejection on December 22, 2005. Amended claims 1, 11, and original claims 2-10, 12-20, were reconsidered and entered, as stated in an Advisory Action dated 26 January 2006. The Advisory Action stated that "In response to Applicant's argument, the Patent Office maintain the rejection, ..." The claims as entered, which are the subject of this appeal brief, are reproduced in the Claims Appendix

V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention, as recited in independent claims 1 and 11, provides a method and apparatus for transferring information between two networks operating under different physical layer or layer 2 protocols. The invention is directed specifically to transferring data-frames between Virtual Local Area Network (VLAN) stations operating in a first network under an Ethernet protocol, and Fibre Channel (FC) zone stations operating in a second network under an FC protocol.

In order to effect the transfer, a gateway couples the two networks. A "combination" grouping is formed by associating a specific VLAN with a specific zone, and the association is stored in the gateway. From the point of view of a VLAN station in the combination, all stations in the combination appear as native VLAN stations. From the point of view of an FC station in the combination, all stations in the combination appear as native FC zone stations (page 4, lines 21-29, in the present patent application). This property of transparency between a VLAN and an FC zone was not available before the present invention.

The method recited in claim 1 comprises the following steps:

(a) Operating a first network comprising first-network-stations under an Ethernet protocol.

(b) Operating a second network comprising second-network-stations under a Fibre Channel (FC) protocol.

(c) Grouping the first-network-stations into one or more VLANs, each of the VLANs comprising one or more of the first-network-stations which transfer a respective VLAN-data-frame within the VLAN.

(d) Grouping the second-network-stations into one or more FC zones, each of the zones comprising one or more of the second-network-stations which transfer a respective zone-data-frame within the zone.

(e) Coupling the first and the second networks together using a gateway to convey data between the networks.

(f) Configuring the gateway with a primary association mapping a primary VLAN chosen from the VLANs and a primary zone chosen from the zones. The primary VLAN transfers a primary VLAN-data-frame comprising primary-data within the primary VLAN. The primary zone transfers a primary zone-data-frame comprising the primary-data within the primary zone.

(g) Translating in the gateway between the primary VLAN-data-frame and the primary zone-data-frame, responsive to the primary association, so as to convey the primary-data between the primary VLAN and primary zone via the gateway.

Steps (a), (b), (c) (d) (e) and (f) of the method are described with reference to Fig. 1 of the present patent application. Fig. 1 shows a compound network (10), comprising an FC fabric (11) and an Ethernet Wide Area Network (WAN) (26), which are coupled by a gateway (22). Steps (a) and (b), operating the networks, are described on page 13, lines 6-12 and lines 27-29. Steps (c) and (d), wherein stations are grouped in the two networks, are supported by the description of the formation of FC zones (12) and (13), and the description of the formation of VLANs (32) and (34) (page 13, lines 12-23; page 13, line 31 - page 14, line 1; and page 14, lines 9-12). Step (e), coupling the networks with the gateway, is described on page 14, lines 1-9, wherein it is also stated that the gateway is able to convert between data-frames of the two networks. The association between a VLAN and an FC zone, that is configured in the gateway in step (f), is described on page 14, lines 17-29.

The translation between a VLAN data-frame and a zone-data-frame, and the conveyance of the data in the data-frames, in step (g), is described in reference to the flowcharts of Figs. 3 and 4 (page 16, line 22 – page 17, line 29, and page 17, line 30 – page 19, line 9). Fig. 3 shows steps for transferring data from an FC zone to a VLAN. Fig. 4 shows steps for transferring data from a VLAN to an FC zone.

Claim 11 recites a gateway that carries out the steps of claim 1.

The remaining claims each depend from one of the above-mentioned independent claims.

VI. GROUNDS OF OBJECTION TO BE REVIEWED ON APPEAL

All the claims currently pending in this application were rejected under 35 U.S.C. 103(a) over Kanekar et al. (U.S. Patent 6,751,191) in view of Wang et al. (U.S. Patent 6,834,326). Appellant believes this rejection should be reversed.

VII. ARGUMENT

1. The Section 103(a) Rejection of Claims 1 and 11

Appellant respectfully submits that the Examiner erred in maintaining that it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kanekar and Wang so as to arrive at the inventive method and gateway recited by claims 1 and 11.

Claims 1 and 11 each recite using a gateway to couple an Ethernet network to an FC network. The gateway is configured with an association that maps a VLAN in the Ethernet network with a zone in the FC network, and data is conveyed between the VLAN and the zone, via the gateway, using the association.

MPEP 2143.03 states:

> To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Applying these statements to the present case, the question to be answered is whether the cited art teaches or suggests associating in a gateway a VLAN of an Ethernet network with a zone of an FC network, and, in response to the association, translating between a VLAN-data-frame and a zone-data-frame so as to convey data between the VLAN and the zone via the gateway. If not, then the Examiner has failed to make a *prima facie* case of obviousness.

Kanekar describes methods for load sharing and redundancy in a network which reduce the switchover time upon failure of a router. The methods use a master router and a slave router which may be associated with a default gateway by assigning a shared IP address and a shared MAC address to the two routers. Prior to failure of the master router it communicates shared

state information to the slave router, which is operating in a standby mode. On failure of the master, the slave takes over the shared IP and MAC addresses (column 2, lines 13-38.)

Kanekar describes three layers of protocol: a physical layer, a layer 2, and a layer 3 level, that are used to route traffic (column 2, lines 39-40). Kanekar describes how, at these levels, hardware and/or software switch the routing of packets from the master and the slave, which also maintain databases and/or routing tables at the layer 2 and at layer 3 levels (column 2, lines 25-38, and column 2, line 49 – column 4, line 17). Typically, as also described in his disclosure, the routing is performed via virtual local area networks (VLANs) which are incorporated into the network (column 9, lines 3-23). However, the master and slave of Kanekar are routers, using forwarding data, consisting of, for example, a layer 2 database and a layer 3 routing table (column 2, lines 54-59). Thus, even when applied to the VLANs, there is no need for translation between different protocols in the routers since Kanekar's disclosure shows no reference whatsoever to change of physical layer protocol or layer 2 protocol. Thus, Kanekar neither teaches nor suggests translation between data-frames of different protocols, as is required by claims 1 and 11.

Wang describes a system for connecting redundant arrays of inexpensive devices (RAIDs) to a controller via a network. The controller multicasts command packets to the devices, and is typically configured as an intelligent switch (Abstract). Using multicasting allows the disk drives to be operated redundantly, while being separated from the controller by the network. Wang's network, as stated by Wang, "... may comprise ethernet, fibre channel or other physical layer protocol" (Abstract). Variations on this statement are also given in Wang, e.g., at column 1, lines 21-22, and column 2, lines 58-62. However, as is apparent from Wang's disclosure, these statements merely show that any one of these physical layer protocols may be used in Wang's network. In particular, Wang makes no reference at all to change of physical layer or layer 2 protocol as the multicast command packets are routed through his network, and there is no suggestion of the translation between different data-frames that would be required if such a protocol change were present.

Thus, to summarize, neither Kanekar nor Wang make any suggestion of translation between data-frames of different protocols, as is explicitly required by claims 1 and 11. Therefore, these claims are plainly patentable over the cited art.

In rejecting claim 1, the Examiner stated (article 5 in the final official action dated August 22, 2005): "Kanekar teaches ... a first network comprising first-network-stations operating under an Ethernet protocol and a second network comprising second-network-stations operating under a Fibre Channel (FC) protocol, ..." In the same article, the Examiner also stated: "But Kanekar does not explicitly teach a Fibre channel protocol." These statements are plainly contradictory, and in fact the latter statement is correct. Kanekar does not teach a Fibre Channel protocol and at no point do two sections of his network operate under different physical protocols, nor under different layer 2 protocols.

In support of his statements regarding Kanekar, the Examiner referenced, with respect to Fig. 7, VLAN1 724 and VLAN2 728, and the default gateway 1404 of Fig. 14. The Examiner identified Kanekar's VLAN1, VLAN2, and default gateway respectively with the VLAN, zone, and gateway of the present invention. In order to make this identification valid, the VLAN2 of Kanekar would have to operate as an FC zone, which is not suggested by Kanekar. Furthermore, Kanekar's default gateway would have to perform the translation performed by the gateway of the present invention. In support of the translation required by claim 1, the Examiner cited column 16, lines 21-57 of Kanekar. However, this citation deals only with how the default gateway of Kanekar redirects packets on failure of one of the routers in the default gateway, and in the citation there is no suggestion whatsoever for translation between protocols in the gateway. In support of the association required by claim 1, the Examiner cited column 15, line 67 – column 16 line 20 of Kanekar, and specified configuring the master and slave routers of Fig. 14A, which the text citation describes. However, there is no hint or suggestion in the citation of configuration of an association between the VLANs of Kanekar in the master or slave routers. Thus, neither operation of a VLAN as an FC zone, nor configuration of an association between a VLAN and an FC zone in a gateway, nor translation in a gateway, is suggested by Kanekar.

As the Examiner stated (article 5), "Wang discloses a Fibre channel protocol," and the Appellant agrees that this is true. The Examiner further stated "It would have been obvious ... to implement the teachings of Wang into the computer system of Kanekar to have a Fibre Channel protocol ... to support full-duplex transfer rates." However, performing the implementation required, i.e., configuring the VLAN2 of Kanekar to be an FC zone, would render Kanekar's network completely inoperative, since the incompatibility of the protocols requires exactly the type of translation provided by the present invention in order for the two systems, Ethernet and VLANs, and Fibre Channel and zones, to coexist. Thus, the Examiner has failed to show any suggestion of the present invention in the cited art.

2. The Section 103(a) Rejection of Claims 2 and 12

Appellant respectfully submits that even if independent claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 2 and 12.

Claims 2 and 12 state that the gateway has a content addressable memory, wherein the primary association is stored, and wherein the content addressable memory uses the primary association to perform the translation. Content addressable memories (CAMs) are described in the Background of the Invention (page 3, lines 3 - 20), where they are defined as being a memory to which data is supplied, and from which the address where that data resides is read. This definition is in accordance with the meaning of CAM that is known and accepted in the art.

In rejecting claims 2 and 12, the Examiner stated that the added limitation recited by these claims is taught by Kanekar, in regard to Switch 1402 of Fig. 14A (column 16, lines 1-57). The cited section describes the operation of three routers, two of which are included in a master-slave routing and switching system 1402, and includes details of how the routers behave when one of the routers in system 1402 fails. In the cited section there is a paragraph (lines 47-57) stating that Kanekar's technique may be implemented in software and/or hardware, and the examples of hardware given are "a specially constructed machine" and "a network interface

card." However, there is no suggestion in the cited section, or in any other section of Kanekar's disclosure, that any memory used by elements of Kanekar's system comprises a content addressable memory.

Thus, Appellant respectfully submits that claims 2 and 12 are independently patentable over the cited art.

3. The Section 103(a) Rejection of Claims 3 and 13

Appellant respectfully submits that even if independent claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 3 and 13.

Claims 3 and 13 state that translating in the gateway is performed transparently, so that neither the primary VLAN nor the primary zone are aware of the translation.

In rejecting claims 3 and 13, the Examiner stated that the added limitation recited by these claims is taught by Kanekar, in regard to Switch 1402 of Fig. 14A (column 16, lines 1-57). The cited section is the same as that for claims 2 and 12, and is described in Section II above. In the cited section, and in the whole of Kanekar's disclosure, Kanekar is silent on the property of transparency. Specifically, there is no suggestion for transferring transparently between a VLAN and a zone, as is required by claims 3 and 13.

Thus, Appellant respectfully submits that claims 3 and 13 are independently patentable over the cited art.

4. The Section 103(a) Rejection of Claims 4 and 14

Appellant respectfully submits that even if independent claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still

would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 4 and 14.

Claims 4 and 14 state that the gateway is configured with a secondary association mapping a secondary VLAN with a secondary zone. The secondary VLAN transfers a secondary-VLAN-data-frame comprising secondary data. The secondary zone transfers a secondary-zone-data-frame comprising the secondary data. The gateway translates between the two data-frames, responsive to the secondary association, to convey the secondary data between the secondary VLAN and the secondary zone.

In rejecting claims 4 and 14, the Examiner stated that the added limitation recited by these claims is taught by Kanekar, in regard to VLAN2 connected to router R2, as shown in Fig, 14A (column 15, line 67 – column 16, line 47). The cited section describes how a third router (R3) is added to Kanekar's system of master (R1) and slave (R2) routers. The section explains how the routers route traffic before and after failure of the master router. However, all three routers are coupled to the same two VLANs (VLAN1 and VLAN2), and in the cited section there is no suggestion that any of the routers could maintain a second association between two other VLANs. Even granted that such a second association is possible, there is no suggestion whatsoever that one of the other VLANs in the second association be chosen from FC zones, as is required by claims 4 and 14.

Thus, Appellant respectfully submits that claims 4 and 14 are independently patentable over the cited art.

5. The Section 103(a) Rejection of Claims 5 and 15

Appellant respectfully submits that even if claims 4 and 14 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitation recited by dependent claims 5 and 15.

Claims 5 and 15 add the limitation that the secondary VLAN and the secondary zone are restricted from accessing the primary-data, i.e., the data transferred between the primary VLAN and the primary zone. In other words, although the stations in the secondary VLAN and the secondary zone may transfer data between themselves, they are restricted from accessing the primary VLAN and the primary zone.

In rejecting claims 5 and 15, the Examiner stated that the added limitation recited by these claims is taught by Kanekar, in regard to VLAN1 connected to the master router R1 in Fig. 14A (column 15, line 67 – column 16, 47). The cited section is the same as that for claims 4 and 14, and is described in Section IV above. Within the cited section there is a paragraph describing avoidance of "blackholing" of reverse traffic (column 16, lines 39 – 47), and Appellant believes that it is this paragraph that the Examiner considers to be the limitation taught by Kanekar. The avoidance described in the paragraph is performed by only allowing certain traffic to be forwarded to router R2. However, this restriction is completely different from the restriction required by claims 5 and 15, which requires data being restricted from crossing between a primary association and secondary association, each association having its own VLAN and FC zone. There is thus no suggestion that the secondary VLAN and the secondary zone are restricted from accessing the primary-data, as is required by claims 5 and 15.

Thus, Appellant respectfully submits that claims 5 and 15 are independently patentable over the cited art.

6. The Section 103(a) Rejection of Claims 6 and 16

Appellant respectfully submits that even if claims 4 and 14 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 6 and 16.

Claims 6 and 16 add the limitations that a joint second-network-station, chosen from the second-network-stations, is in the primary zone and in the secondary zone. The primary-data is

conveyed between the primary VLAN and the joint second-network-station, in response to the primary association. The secondary-data is conveyed between the secondary VLAN and the joint second-network-station, in response to the secondary association.

In rejecting claims 6 and 16, the Examiner alleged that Kanekar teaches the added limitations, citing, without further elaboration, Fig. 8, column 9, line 49 – column 10, line 11, and column 16, line 1 – 57. The second part of the cited section, i.e., column 16, line 1 – 57, is described above in section IV. The first part of the cited section, i.e., column 9, line 49 – column 10, line 11, refers to VLAN 1, VLAN 2, VLAN 3, and VLAN 4, and describes how, on failure of one of the routers in a master-slave combination, the remaining router takes over the hosts (on the VLANs) initially serviced by the failed router. In light of the lack of elaboration, appellant believes that the Examiner assumes that the remaining router in the cited section corresponds to the joint second-network-station of claims 6 and 16. However, all of the routers of Kanekar's network function only in one physical layer protocol. Thus, there is no suggestion whatsoever that a router of Kanekar may be chosen from a station operating in a primary and secondary FC zone, and may also convey data between the station and a VLAN.

Thus, Appellant respectfully submits that claims 6 and 16 are independently patentable over the cited art.

7. The Section 103(a) Rejection of Claims 7 and 17

Appellant respectfully submits that even if claims 4 and 14 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 7 and 17.

Claims 7 and 17 add the limitations that a joint first-network-station, chosen from the first-network-stations, is in the primary VLAN and in the secondary VLAN. The primary-data is conveyed between the primary zone and the joint first-network-station, in response to the

primary association. The secondary-data is conveyed between the secondary zone and the joint second-first-station, in response to the secondary association.

In rejecting claims 7 and 17, the Examiner stated that Kanekar teaches the added limitations, citing VLAN 1 and VLAN 2 of Fig. 8 with no text citation. Appellant believes that the Examiner meant to indicate that the joint first-network-station of the claims could be a station in VLAN 1 and VLAN 2. However, there is no suggestion in Kanekar's description of VLAN 1 or VLAN 2 that any data could be conveyed between the joint first-network-station and a primary FC zone, or between the joint first-network-station and a secondary FC zone. Both of these latter limitations are required by claims 7 and 17.

Therefore, Appellant respectfully submits that claims 7 and 17 are independently patentable over the cited art.

8. The Section 103(a) Rejection of Claims 8 and 18

Appellant respectfully submits that even if claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 8 and 18.

Claims 8 and 18 add the limitations that a virtual port of the gateway is allocated to the primary association, and that translating in the gateway comprises operating the gateway as a virtual switch for checking the connection between the virtual port and a destination first-network-station in the primary VLAN.

In rejecting claims 8 and 18, the Examiner stated that Kanekar teaches the added limitations, citing virtual switch 1402 of Fig. 14A, and column 15, line 67 – column 16, line 15. The cited text describes how a third router (1408) is added to the master and slave routers (1404 and 1406) of Kanekar's routing and switching system (1402). The text also states that the three routers support a first VLAN and a second VLAN. However, there is no suggestion in the cited

text that a virtual port is allocated to an association of the first and the second VLAN. This is a requirement of claims 8 and 18.

Therefore, Appellant respectfully submits that claims 8 and 18 are independently patentable over the cited art.

9. The Section 103(a) Rejection of Claims 9 and 19

Appellant respectfully submits that even if claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 9 and 19.

Claims 9 and 19 add the limitations that translating in the gateway comprises translating a source identity of the primary VLAN to a virtual source identity in the primary zone-data-frame. As is also recited in the claims, the translation is for data conveyed from the first network, i.e., the source Ethernet network, to the second network, i.e., the destination FC network.

In rejecting claims 9 and 19, the Examiner stated that Kanekar teaches the added limitations, stating the "packet flow from H1 to H2 of Fig. 14A," with no text citation from Kanekar. However, the packet flow of Kanekar does not require translation of an identity of a VLAN to a source identity in a zone-data-frame, as is required by claims 9 and 19, and there is no suggestion of such translation in Kanekar's disclosure.

Thus, Appellant respectfully submits that claims 9 and 19 are independently patentable over the cited art.

10. The Section 103(a) Rejection of Claims 10 and 20

Appellant respectfully submits that even if claims 1 and 11 were conceded to be unpatentable over Kanekar in view of Wang, the combined teachings of these references still

would not have led a person of ordinary skill in the art to arrive at the additional limitations recited by dependent claims 10 and 20.

Claims 10 and 20 add the limitations that translating in the gateway comprises translating a virtual destination identity in the primary zone-data-frame to an identity of the primary VLAN in the primary VLAN-data-frame. The translation is for data conveyed from the second network, i.e., the source FC network, to the first network, i.e., the destination Ethernet network.

In rejecting claims 10 and 20, the Examiner stated that Kanekar teaches the added limitations, equating the first and second networks of the claim with "network" 810 and "network" 804 of Kanekar, and citing column 9, lines 24-53. The cited text describes how the two routers (R1 and R2) of Kanekar's system each have a first interface 804 and a second interface 810, and how load sharing may be achieved between the two routers by associating different users and/or VLANs with different default gateways. Even if it were conceded that the interfaces of Kanekar might be equivalent to networks, there is no hint nor suggestion in the citation for translating at all, let alone from a destination identity in an FC zone-data-frame to an identity of a VLAN in a VLAN-data-frame, as is required by claim 10 and claim 20.

VIII. CONCLUSION

The withdrawal of the outstanding rejections and the allowance of claims 1-20 is earnestly solicited.

Dated: May 16, 2006

Respectfully submitted,

By _____

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IX. CLAIMS APPENDIX A

1. A method for transferring information, comprising:

operating a first network comprising first-network-stations under an Ethernet protocol;

operating a second network comprising second-network-stations under a Fibre Channel (FC) protocol;

grouping the first-network-stations into one or more virtual local area networks (VLANs), each of the VLANs comprising one or more of the first-network-stations which transfer a respective VLAN-data-frame within the VLAN;

grouping the second-network-stations into one or more FC zones, each of the zones comprising one or more of the second-network-stations which transfer a respective zone-data-frame within the zone;

coupling the first and the second networks together using a gateway to convey data between the networks;

configuring the gateway with a primary association mapping a primary VLAN chosen from the VLANs and a primary zone chosen from the zones, the primary VLAN transferring a primary VLAN-data-frame comprising primary-data, comprised in the data, therein, and the primary zone transferring a primary zone-data-frame comprising the primary-data therein; and

translating in the gateway between the primary VLAN-data-frame and the primary zone-data-frame, responsive to the primary association, so as to convey the primary-data between the primary VLAN and the primary zone via the gateway.

2. A method according to claim 1, wherein configuring the gateway with the primary association comprises storing the primary association in a memory comprised in the gateway, the

memory comprising a content addressable memory which uses the primary association to perform the translation.

3. A method according to claim 1, wherein translating in the gateway between the primary VLAN-data-frame and the primary zone-data-frame comprises transferring the primary-data transparently between the primary VLAN and the primary zone so that the primary VLAN and the primary zone are not aware of translations performed in the gateway.

4. A method according to claim 1, and comprising:

configuring the gateway with a secondary association mapping a secondary VLAN chosen from the VLANs and a secondary zone chosen from the zones, the secondary VLAN transferring a secondary VLAN-data-frame comprising secondary-data, comprised in the data, therein, and the secondary zone transferring a secondary zone-data-frame comprising the secondary-data therein; and

translating in the gateway between the secondary VLAN-data-frame and the secondary zone-data-frame, responsive to the secondary association, so as to convey the secondary-data between the secondary VLAN and the secondary zone via the gateway.

5. A method according to claim 4, and comprising restricting the secondary VLAN and the secondary zone from accessing the primary-data.

6. A method according to claim 4, and comprising:

providing a joint second-network-station, chosen from the second-network-stations, implemented to be in the primary zone and the secondary zone;

conveying the primary-data between the joint second-network-station and the primary VLAN, responsive to the primary association; and

conveying the secondary-data between the joint second-network-station and the secondary VLAN, responsive to the secondary association.

7. A method according to claim 4, and comprising:

providing a joint first-network-station, chosen from the first-network-stations, implemented to be in the primary VLAN and the secondary VLAN;

conveying the primary-data between the joint first-network-station and the primary zone, responsive to the primary association; and

conveying the secondary-data between the joint first-network-station and the secondary zone, responsive to the secondary association.

8. A method according to claim 1, wherein configuring the gateway comprises allocating a virtual port of the gateway to the primary association, and wherein translating in the gateway comprises operating the gateway as a virtual switch so as to check a connection between the virtual port and a destination first-network-station comprised in the primary VLAN.

9. A method according to claim 1, wherein translating in the gateway comprises translating an identity of the primary VLAN in the primary VLAN-data-frame to a virtual source identity in the primary zone-data-frame, for data conveyed from the first network to the second network.

10. A method according to claim 1, wherein translating in the gateway comprises translating a virtual destination identity comprised in the primary zone-data-frame to an identity of the primary VLAN in the primary VLAN-data-frame, for data conveyed from the second network to the first network.

11. Apparatus for transferring information comprising:

a gateway which is adapted to couple a first network operating under an Ethernet protocol and comprising first-network-stations grouped into one or more VLANs, each VLAN comprising one or more of the first-network-stations which transfer a respective VLAN-data-frame within the VLAN, and a second network operating under a Fibre Channel (FC) protocol and comprising one or more second-network-stations grouped into one or more zones, each zone comprising one or more of the second-network-stations which transfer a respective zone-data-frame within the zone,

the gateway also being adapted to map a primary association between a primary VLAN chosen from the VLANs and a primary zone chosen from the zones, the primary VLAN transferring a primary VLAN-data-frame comprising primary-data therein, and the primary zone transferring a primary zone-data-frame comprising the primary-data therein, and to translate between the primary VLAN-data-frame and the primary zone-data-frame, responsive to the primary association, so as to convey the primary-data between the primary VLAN and the primary zone.

12. Apparatus according to claim 11, wherein the gateway comprises a content addressable memory wherein the primary association is stored and which is adapted to perform the translation.

13. Apparatus according to claim 11, wherein translating in the gateway between the primary VLAN-data-frame and the primary zone-data-frame comprises transferring the primary-data transparently between the primary VLAN and the primary zone so that the primary VLAN and the primary zone are not aware of translations performed in the gateway.

14. Apparatus according to claim 11, wherein the gateway is adapted to map a secondary association between a secondary VLAN chosen from the VLANs and a secondary zone chosen from the zones, the secondary VLAN transferring a secondary VLAN-data-frame comprising secondary-data therein, and the secondary zone transferring a secondary zone-data-frame comprising the secondary-data therein, and to translate between the secondary VLAN-data-frame

and the secondary zone-data-frame, responsive to the secondary association, so as to convey the secondary-data between the secondary VLAN and the secondary zone.

15. Apparatus according to claim 14, wherein the gateway is adapted to restrict the secondary VLAN and the secondary zone from accessing the primary-data.

16. Apparatus according to claim 14, and comprising a joint second-network-station, chosen from the second-network-stations, implemented to be in the primary zone and the secondary zone, so that the primary-data is conveyed between the joint second-network-station and the primary VLAN responsive to the primary association, and the secondary-data is conveyed between the joint second-network-station and the secondary VLAN responsive to the secondary association.

17. Apparatus according to claim 14, and comprising a joint first-network-station, chosen from the first-network-stations, implemented to be in the primary VLAN and the secondary VLAN, so that the primary-data is conveyed between the joint first-network-station and the primary zone responsive to the primary association, and the secondary-data is conveyed between the joint first-network-station and the secondary zone responsive to the secondary association.

18. Apparatus according to claim 11, wherein the gateway comprises a virtual port allocated to the primary association, and wherein the gateway is adapted to operate as a virtual switch so as to check a connection between the virtual port and a destination first-network-station comprised in the primary VLAN.

19. Apparatus according to claim 11, wherein the gateway is adapted to translate an identity of the primary VLAN in the primary VLAN-data-frame to a virtual source identity in the primary zone-data-frame, for data conveyed from the first network to the second network.

20. Apparatus according to claim 11, wherein the gateway is adapted to translate a virtual

destination identity comprised in the primary zone-data-frame to an identity of the primary VLAN in the primary VLAN-data-frame, for data conveyed from the second network to the first network.

X. EVIDENCE APPENDIX B

No evidence has been submitted under 37 C.F.R. §§ 1.130, 1.131 or 1.132. No other evidence has been entered by the Examiner and relied upon in this appeal.

XI. RELATED PROCEEDINGS APPENDIX C

There are no related proceedings.